CHAPTER 11

Glossary

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Adaptive management: Monitoring or assessing the progress in achieving specific objectives and incorporating what is learned into future management plans.

Altered trophic interactions: Any change, either natural or unnatural, that results in a change in the feeding relationship of species in a community.

Anadromous fish: Species that hatch in freshwater, mature in saltwater, and return to freshwater to spawn.

Bank armoring or hardening: The addition of material to a shoreline that is not natural to the site. Bank armoring or hardening structures range from vertical walls to sloped rock rubble, and are put in place to prevent the loss of property landward .

Baseflow: That component of streamflow derived from groundwater inflow or discharge. Can be presented in a variety of measurement units including cubic feet per second (cfs) and inches (in).

Basin: The area of land that drains water, sediment, and dissolved materials to a common point along a stream channel.

Benthic: Of, or pertaining to, animals and plants living on or within the substrate of a water body.

Best management practices: Methods, measures, and practices selected to reduce or eliminate the introduction of pollutants from diffuse sources into receiving waters.

Bioengineering: Combining structural, biological, and ecological concepts to construct living structures for erosion, sediment, or flood control.

Biofiltration: A method by which water pollutants are naturally filtered out before they can enter water bodies.

Biological diversity (biodiversity): Variety and variability among living organisms and the ecological complexes in which they occur; encompasses different ecosystems, species, and genes.

Buffer: An area of intact vegetation maintained between human activities and a particular natural feature, such as a stream. The buffer reduces potential negative impacts by providing an area around the feature that is unaffected by this activity.

Channel migration zone: Those areas subject to risk due to stream bank destabilization, rapid stream incision, stream bank erosion, and shifts in location of the channel.

***Channelization*:** Straightening the meanders of a river; often accompanied by placing riprap or concrete along banks to stabilize the system.

***Channelized stream*:** A stream that has been straightened, runs through pipes or revetments, or is otherwise artificially altered from its natural meandering course.

***Connectivity*:** Unbroken linkages in a landscape, typified by streams and riparian areas**.**

Conservation easement: A legal agreement between a landowner and a qualified conservation organization that permanently limits a property's uses in order to protect its conservation values.

Core production subarea: Subarea where chinook salmon are present on an annual basis. The core production subarea represents the center of (highest) abundance for each population affiliation (for spawning, rearing, and migration areas).

Degradation: The lowering of the streambed or widening of the stream channel by erosion. The breakdown and removal of soil, rock and organic debris.

Diversity: Variation that occurs in plant and animal taxa (i.e., species composition), habitats, or ecosystems.

Effective impervious surface: A surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development; and/or a surface area that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions.

Endocrine: Refers to the system of glands that secrete hormones directly into the bloodstream. These hormones regulate many body processes.

Episodic: Chinook salmon are present infrequently and may not be present or observed during the typical 4- to 5-year life cycle. This indicates that when fish are observed, they are strays from another production area and not necessarily the progeny of natural production from the area in question.

Evolutionarily significant unit (ESU): The geographic scale used by the National Marine Fisheries Service to distinguish salmon populations that share similar genetic, ecological, and life history traits, but differ in important ways from salmon in other ESUs.

Factor of decline: Natural and anthropogenic factors that contribute to the decline of salmonids. These not only include climate and ocean conditions and natural predation but also the factors that are more commonly thought to be within human control such as habitat modification, harvest, hatchery practices, and introduction of non-native species.

Flow regime: Characteristics of stream discharge over time. Natural flow regime is the regime that occurred historically.

Geomorphology: Study of the form and origins of surface features of the Earth.

Hydrograph: Chart of water levels over time.

Hydrology: Study of the properties, distribution, and effects of water on the Earth's surface, subsurface, and atmosphere.

Hydromodification: The channelization and armoring of natural banks to prevent flooding or to protect stream-adjacent property and structures from erosion; navigation activities (ditching, dredging, and channel straightening); anthropogenic alterations in channel morphology (planform, cross-sectional area, bed and bank configuration); and anthropogenic changes in the amount of in-channel large woody debris.

Impervious surface: Any surface that does not allow water to percolate naturally into the ground.

Large woody debris: Large woody material that has fallen to the ground or into a stream. An important part of the structural diversity of streams. LWD is also referred to as *coarse woody debris* (CWD). Either term usually refers to pieces at least 20 inches (51 cm) in diameter.

Limiting factor: Single factor that limits a system or population from reaching its highest potential.

mg/L: milligrams per liter. For dissolved oxygen concentrations in water it may also be expressed as parts per million (ppm).

Migratory corridors: Any area through which fish migrate on their way upstream or downstream.

Native: Occurring naturally in a habitat or region; not introduced by humans.

Nearshore marine zone: Habitats that lie between the lower limit of the photic zone (approximately at minus 30 meters mean lower low water) and the upland-aquatic interface.

Non-native species: A species that does not occur naturally in a habitat or region.

Non-point source pollution: Polluted runoff from sources that cannot be defined as discrete points, such as areas of timber harvesting, surface mining, agriculture, and livestock grazing.

Noxious weeds: Non-native plants that have been introduced accidentally or as ornamentals that spread quickly, displace desirable plant species, and are extremely difficult to control.

Physiological transitions: See transition zone.

Refuge areas: Areas that provide protection to a species from predators.

Resident fish: Fish species that complete their entire life cycle in freshwater.

Retention/detention facilities: A type of drainage facility designed either to hold water for a considerable length of time and then release it by evaporation, plant transpiration, and/or infiltration into the ground, or to hold surface water and stormwater runoff for a short period of time and then release it to the surface water and stormwater conveyance system.

Riparian: Type of wetland transition zone between aquatic habitats and upland areas. Typically, an area on or by land bordering a stream, lake, tidewater, or other body of water.

Riprap: A facing layer or protective mound of stones placed to prevent erosion or sloughing of a structure or embankment due to the flow of surface water and stormwater runoff.

Salmon: Includes all species of the salmonid family.

Salmonid: Fish of the family Salmonidae, including salmon, trout, char, and bull trout.

Satellite streams: Chinook salmon are present most years (more than half the years of a typical 4- to 5-year life cycle) but are less abundant than in core areas. Records are more incomplete, conservation efforts are inconsistent among potential satellite areas, and methods of enumeration vary.

Sediment: Material carried in suspension by water, which will eventually settle to the bottom.

Side channel: A portion of an active channel that does not carry the bulk of stream flow. Side channels may carry water only during high flows, but are still considered part of the total active channel.

Shoreline softening: A nonstructural approach to preventing loss of upland property. Usually refers to the placement of beach material or vegetation management at the shore.

Smolt: Juvenile salmon migrating seaward; a young anadromous trout, salmon, or char undergoing physiological changes that will allow it to change from life in freshwater to life in the sea. The smolt state follows the parr state.

Stock: Group of fish that is genetically self-sustaining and isolated geographically or temporally during reproduction. Generally, a local population of fish. More specifically, a local population – especially that of salmon, steelhead (rainbow trout), or other anadromous fish – that originates from specific watersheds as juveniles and generally returns to its birth streams to spawn as adults.

Substrate: Refers to the class or type of material (for example, sand, gravel cobble) beneath the water column.

Temperature stratification: Refers to the stratification of lakes and reservoirs into layers of water with different temperatures and densities. Usually occurs in spring and early summer when the combination of solar heating and mixing of near-surface water layers by the wind brings about the warming of the upper portion of the lake water column.

Transition zone: Refers to an area in which species migrating between ecological zones undergo biological changes in order to adapt to another ecosystem. For Northwest salmon, the nearshore zone is known as a transition zone as salmon acclimate to more saline waters (if out-migrating) or non-saline waters (if in-migrating).

Urban growth area: A political boundary in which urban growth is encouraged and concentrated via management plans.

Watershed: Entire area that contributes both surface water and underground water to a particular lake or river.

Watershed rehabilitation: Used primarily to indicate improvement of watershed condition or certain habitats within the watershed. Compare watershed restoration.

Watershed restoration: Reestablishing the structure and function of an ecosystem, including its natural diversity; a comprehensive, long-term program to return watershed health, riparian ecosystems, and fish habitats to a close approximation of their condition prior to human disturbance.

Weir: Device across a stream to divert fish into a trap or to raise the water level or divert its flow. Also a notch or depression in a dam or other water barrier through which the flow of water is measured or regulated.

Wild stock: A stock that is sustained by natural spawning and rearing in the natural habitat regardless of origin.